

On a Branch of Cordaites, bearing Fruit. By Leo Lesquereux. Plate I.

(Read before the American Philosophical Society, April 4th, 1879.)

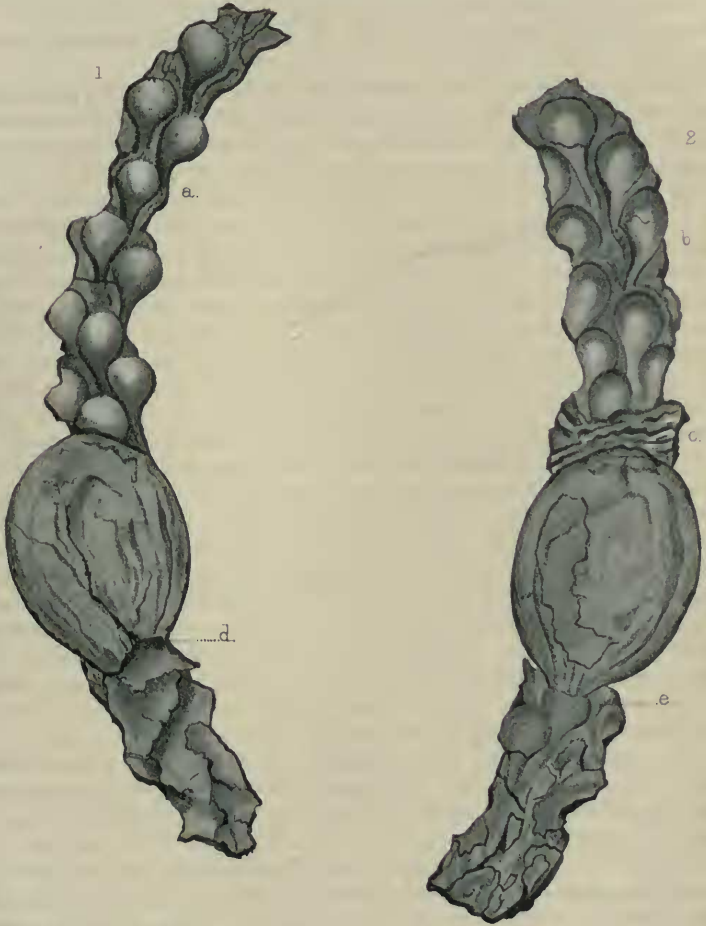
In a former paper, Proc. Am. Phil. Soc. March, 1868, I have given an account of the great work of Grand'Eury, especially considering his researches on the *Cordaites*.

Recent discoveries in the American Coal fields have afforded the means, not only of judging the value and the importance of the facts considered by the French author and of confirming his conclusions, but have also exposed in a new light some peculiar characters of these remarkable plants.

In considering the fruits of *Cordaites* (*Cordaicarpus*), p. 327, of the paper, it is remarked on *Antholites* or flowers of *Cordaites*, that except small nutlets, figured by Newberry, Dawson and Grand'Eury, and others, none of the large fruits commonly found in the Coal Measures have been found attached to stems or branches of *Cordaites*, nor indeed to any other kind of coal plants. Nutlets of *Antholites* are not even as large as peas, while the fruits of *Cordaites*, as Grand'Eury has figured them and as they are also represented, Pl. LXXXIII of the U. S. Coal flora,* vary in diameter from one to two and a half centimeters and therefore are, by their size, without correlation to those fixed upon branches of *Antholites*. Admitting as proved that these large nuts are derived from *Cordaites*, the question has been left by Grand'Eury what it was before for all the phyto-paleontologists from the oldest, who like Sternberg have considered the matter already, to those of our time. What is the relation of these fruits to the plants, their position, the mode of attachment, on stems, on branches, isolated and axillary, or in racemes, etc.? This question could be answered only by the discovery of a distinctly characteristic fragment of a *Cordaites* with the fructifications attached to it. It is to record that discovery, due to the persevering researches of Mr. I. F. Mansfield, who has done so much by systematic explorations in his coal bank of Cannelton, Pa., to promote the interest of the American coal flora, that I write this short notice.

The specimen bearing the vegetable remains is a piece of hard black shale, so appropriately split in the plan of stratification that it exposes both the upper face of the vegetable fragment and the counterpart. It represents a branch of *Cordaites costatus* (species figured U. S. Coal flora, Pl. LXXX, f. 1-3.), twelve centimeters long, bending down or like pendent, nearly fifteen millimeters broad, marked in its whole length by prominent, kidney-shaped bolsters, support of pedicels or leaves, placed in spiral order, in the three ranked arrangement, enlarged, inflated in the upper part and abruptly narrowed into a flexuous linear, lanceolate, long base. The nut or fruit is oval, three centimeters long from the point of attachment to the obtuse top, twenty-three millimeters broad, including its inflated border (three millimeters), broadly obtuse and entire at the top, rounded and narrowed at the base to a point of attachment or very short

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CORDAITES COSTATUS, LESQX
BRANCH BEARING FRUIT